

## REMARKS

### A. Background

Claims 1 and 3-56 were pending in the application at the time of the Office Action. The Office Action rejected claims 1, 5, 6, 9, 10, 13, 14, 17, 19, 21, 25, 27, 48, 50, and 56 as being anticipated by cited art. Claims 3, 4, 7, 8, 11, 12, 15, 16, 18, 20, 22, 26, 28-47, 49, and 51-55 were rejected as being obvious over cited art. Applicant has herein cancelled claims 1 and 3-56 and added new claims 57-97. As such, claims 57-97 are presented for the Examiner's consideration in light of the following remarks.

### B. Proposed Claim Amendments

Applicant has herein added new claims 57-97. Applicant submits that claims 57-97 are supported by the specification, drawings and claims as originally filed and do not add new matter. In view of the foregoing, applicant submits that the amendments to the claims do not introduce new matter and entry thereof is respectfully requested.

### C. Rejection on the Merits

#### Rejected Claims

The Office Action rejected claims 1, 5, 6, 9, 10, 13, 14, 17, 19, 21, 25, 27, 48, 50, and 56 under 35 U.S.C. § 102(b) as being anticipated by E.P.O. Patent No. EP 1 094 625 A2 to Takiguchi et al. ("Takiguchi"). Applicant disagrees with the Examiner but has cancelled claims 1, 5, 6, 9, 10, 13, 14, 17, 19, 21, 25, 27, 48, 50, and 56 herein and accordingly submits that the rejection of these claims has thus been rendered moot and should be withdrawn.

The Office Action rejected claims 3, 4, 7, 8, 11, 12, 15, 16, 18, 20, 22, 26, 28, 47, 49, 51 and 52 under 35 U.S.C. § 103(a) as being unpatentable over Takiguchi by E.P.O. Patent No. EP 1 094 625 A2 to Takiguchi et al. Applicant disagrees with the Examiner but has cancelled claims 3, 4, 7, 8, 11, 12, 15, 16, 18, 20, 22, 26, 28, 47, 49, 51 and 52 herein and accordingly submits that the rejection of these claims has thus been rendered moot and should be withdrawn.

The Office Action rejected claims 29-34 under 35 U.S.C. § 103(a) as being unpatentable over Takiguchi in view of U.S. Patent No. 6,856,724 to Bohn et al. (“Bohn”). Applicant disagrees with the Examiner but has cancelled claims 29-34 herein and accordingly submits that the rejection of these claims has thus been rendered moot and should be withdrawn.

The Office Action rejected claims 35-46 under 35 U.S.C. § 103(a) as being unpatentable over Takiguchi/Bohn in further view of U.S. Patent Application Publication No. 2002/0044742 to Yoneda (“Yoneda”). Applicant disagrees with the Examiner but has cancelled claims 35-46 herein and accordingly submits that the rejection of these claims has thus been rendered moot and should be withdrawn.

The Office Action rejected claims 53-55 under 35 U.S.C. § 103(a) as being unpatentable over Takiguchi in view of U.S. Patent Application Publication No. 2004/0008927 to Kowalkowski et al. (“Kowalkowski”). Applicant disagrees with the Examiner but has cancelled claims 53-55 herein and accordingly submits that the rejection of these claims has thus been rendered moot and should be withdrawn.

### **Objected To Claims**

The Office Action objected to claims 23-24 as being dependent upon a rejected base claim, but asserted that the claims would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims. Applicant has cancelled claims 23-24 herein and accordingly submits that the objection of these claims has thus been rendered moot and should be withdrawn.

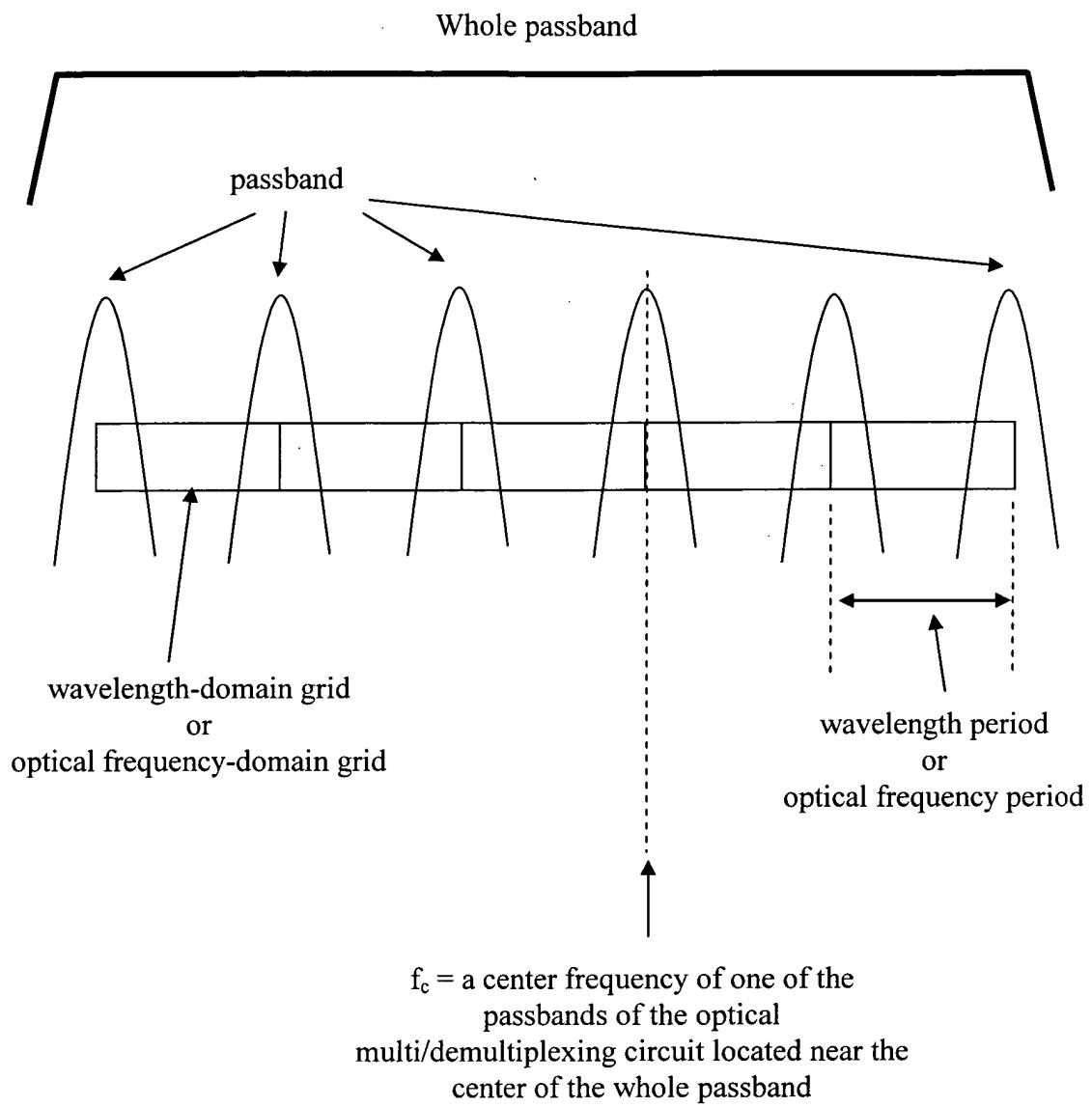
### **New Claims**

Applicant submits that new claims 57-90 are allowable because the cited art does not disclose or suggest all of the claim limitations contained therein. Specifically, new claim 57 includes the limitation,

the phase generating device generates a wavelength-dependent or optical frequency-dependent phase  $\Phi$  with respect to a wavelength or optical frequency of light over the whole passband of the optical multi/demultiplexing circuit, the phase  $\Phi$  setting a wavelength period between the centers of the adjacent passbands which are located on the wavelength-domain grid or setting an optical frequency period between the centers of the adjacent passbands which are located on the optical frequency-domain grid, respectively.

Applicant asserts that the Office Action has not shown that any of the cited art teaches the above limitations. Claims 58-90 depend from claim 57 and thus are allowable for at least the same reasons as discussed with regard to claim 57.

For the benefit of the Examiner, Applicant has herein included a diagram (see below) which conceptually shows one embodiment of the above claimed elements. The diagram applies to both wavelength-domain grids and optical frequency-domain grids.



Disclosure for the concept of a whole passband is given at least by Figures 2 and 53 and the related discussion in the specification.

Similarly, Applicant submits that new claims 91-97 are allowable because the cited art does not disclose or suggest all of the claim limitations contained therein. For example, new claim 91 includes the limitations,

determining a target wavelength-dependent phase  $\Psi(\lambda)$  or a target optical frequency-dependent phase  $\Psi(f)$ , where the target phase  $\Psi(\lambda)$  or  $\Psi(f)$  is a phase required to set a wavelength period between the centers of the adjacent passbands which are located on the wavelength-domain grid or to set an optical frequency period between the centers of the adjacent passbands which are located on the optical frequency-domain grid, respectively; and

configuring the phase generating device such that the wavelength-dependent or optical frequency-dependent phase  $\Phi$  generated by the phase generating device is equal to the target wavelength-dependent phase  $\Psi(\lambda)$  or the target optical frequency-dependent phase  $\Psi(f)$ .

Again, applicant asserts that the Office Action has not shown that any of the cited art teaches the above limitations. Claims 92-97 depend from claim 91 and thus are allowable for at least the same reasons as discussed with regard to claim 91

In view of the foregoing, applicants submit that the amendments to the claims do not introduce new matter and entry thereof is respectfully requested.

No other objections or rejections are set forth in the Office Action.

D. Conclusion

Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited art. Most notably, applicant submits that many if not all of the dependent claims are independently distinguishable over the cited art. Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited art.

In view of the foregoing, applicant respectfully requests the Examiner's consideration and allowance of claims 57-97 presented herein.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 3<sup>rd</sup> day of April 2006.

Respectfully submitted,



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